RAW SEQUENCE LISTING   DATE: 07/05/2001
PATENT APPLICATION: US/09/881,853   TIME: 11:11:57

Input Set : A:\PTO.txt
Output Set: N:\CRF3\07032001\I881853.raw

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     3 <110> APPLICANT: YIN, AMY
     4        MIRAGLIA, SHERI
     5        GODFREY, WAYNE
     6        BUCK, DAVID
     8 <120> TITLE OF INVENTION: HUMAN HEMTOPOIETIC STEM AND PROGENITOR CELL ANTIGEN AND
METHODS FOR ITS
     9        USE
    11 <130> FILE REFERENCE: AMCE-012/02US
C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/881,853
C--> 13 <141> CURRENT FILING DATE: 2001-06-13
    13 <150> PRIOR APPLICATION NUMBER: 08/842,382
    14 <151> PRIOR FILING DATE: 1997-04-23
    16 <150> PRIOR APPLICATION NUMBER: 08/639,891
    17 <151> PRIOR FILING DATE: 1996-04-26
    19 <160> NUMBER OF SEQ ID NOS: 2
    21 <170> SOFTWARE: PatentIn version 3.0
    23 <210> SEQ ID NO: 1
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    25 <212> TYPE: DNA
    26 <213> ORGANISM: Homo sapiens
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    34                                             Met Ala Leu Val Leu Gly
    35                                             1               5
    37 tcc ctg ttg ctg ctg ggg ctg tgc ggg aac tcc ttt tca gga ggg cag     103
    38 Ser Leu Leu Leu Leu Gly Leu Cys Gly Asn Ser Phe Ser Gly Gly Gln
    39               10                  15                  20
    41 cct tca tcc aca gat gct cct aag gct tgg aat tat gaa ttg cct gca     151
    42 Pro Ser Ser Thr Asp Ala Pro Lys Ala Trp Asn Tyr Glu Leu Pro Ala
    43           25                  30                  35
    45 aca aat tat gag acc caa gac tcc cat aaa gct gga ccc att ggc att     199
    46 Thr Asn Tyr Glu Thr Gln Asp Ser His Lys Ala Gly Pro Ile Gly Ile
    47       40                  45                  50
    49 ctc ttt gaa cta gtg cat atc ttt ctc tat gtg gta cag ccg cgt gat     247
    50 Leu Phe Glu Leu Val His Ile Phe Leu Tyr Val Val Gln Pro Arg Asp
    51 55                  60                  65                  70
    53 ttc cca gaa gat act ttg aga aaa ttc tta cag aag gca tat gaa tcc     295
    54 Phe Pro Glu Asp Thr Leu Arg Lys Phe Leu Gln Lys Ala Tyr Glu Ser
    55               75                  80                  85
    57 aaa att gat tat gac aag cca gaa act gta atc tta ggt cta aag att     343
    58 Lys Ile Asp Tyr Asp Lys Pro Glu Thr Val Ile Leu Gly Leu Lys Ile
    59               90                  95                  100
    61 gtc tac tat gaa gca ggg att att cta tgc tgt gtc ctg ggg ctg ctg     391
    62 Val Tyr Tyr Glu Ala Gly Ile Ile Leu Cys Cys Val Leu Gly Leu Leu
    63           105                 110                 115
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65 ttt att att ctg atg cct ctg gtg ggg tat ttc ttt tgt atg tgt cgt    439
66 Phe Ile Ile Leu Met Pro Leu Val Gly Tyr Phe Phe Cys Met Cys Arg
67     120                 125                 130
69 tgc tgt aac aaa tgt ggt gga gaa atg cac cag cga cag aag gaa aat    487
70 Cys Cys Asn Lys Cys Gly Gly Glu Met His Gln Arg Gln Lys Glu Asn
71 135                 140                 145                 150
73 ggg ccc ttc ctg agg aaa tgc ttt gca atc tcc ctg ttg gtg att tgt    535
74 Gly Pro Phe Leu Arg Lys Cys Phe Ala Ile Ser Leu Leu Val Ile Cys
75                 155                 160                 165
77 ata ata ata agc att ggc atc ttc tat ggt ttt gtg gca aat cac cag    583
78 Ile Ile Ile Ser Ile Gly Ile Phe Tyr Gly Phe Val Ala Asn His Gln
79                 170                 175                 180
81 gta aga acc cgg atc aaa agg agt cgg aaa ctg gca gat agc aat ttc    631
82 Val Arg Thr Arg Ile Lys Arg Ser Arg Lys Leu Ala Asp Ser Asn Phe
83             185                 190                 195
85 aag gac ttg cga act ctc ttg aat gaa act cca gag caa atc aaa tat    679
86 Lys Asp Leu Arg Thr Leu Leu Asn Glu Thr Pro Glu Gln Ile Lys Tyr
87     200                 205                 210
89 ata ttg gcc cag tac aac act acc aag gac aag gcg ttc aca gat ctg    727
90 Ile Leu Ala Gln Tyr Asn Thr Thr Lys Asp Lys Ala Phe Thr Asp Leu
91 215                 220                 225                 230
93 aac agt atc aat tca gtg cta gga ggc gga att ctt gac cga ctg aga    775
94 Asn Ser Ile Asn Ser Val Leu Gly Gly Gly Ile Leu Asp Arg Leu Arg
95                 235                 240                 245
97 ccc aac atc atc cct gtt ctt gat gag att aag tcc atg gca aca gcg    823
98 Pro Asn Ile Ile Pro Val Leu Asp Glu Ile Lys Ser Met Ala Thr Ala
99                 250                 255                 260
101 atc aag gag acc aaa gag gcg ttg gag aac atg aac agc acc ttg aag   871
102 Ile Lys Glu Thr Lys Glu Ala Leu Glu Asn Met Asn Ser Thr Leu Lys
103         265                 270                 275
105 agc ttg cac caa caa agt aca cag ctt agc agc agt ctg acc agc gtg   919
106 Ser Leu His Gln Gln Ser Thr Gln Leu Ser Ser Ser Leu Thr Ser Val
107     280                 285                 290
109 aaa act agc ctg cgg tca tct ctc aat gac cct ctg tgc ttg gtg cat   967
110 Lys Thr Ser Leu Arg Ser Ser Leu Asn Asp Pro Leu Cys Leu Val His
111 295                 300                 305                 310
113 cca tca agt gaa acc tgc aac agc atc aga ttg tct cta agc cag ctg   1015
114 Pro Ser Ser Glu Thr Cys Asn Ser Ile Arg Leu Ser Leu Ser Gln Leu
115                 315                 320                 325
117 aat agc aac cct gaa ctg agg cag ctt cca ccc gtg gat gca gaa ctt   1063
118 Asn Ser Asn Pro Glu Leu Arg Gln Leu Pro Pro Val Asp Ala Glu Leu
119                 330                 335                 340
121 gac aac gtt aat aac gtt ctt agg aca gat ttg gat ggc ctg gtc caa   1111
122 Asp Asn Val Asn Asn Val Leu Arg Thr Asp Leu Asp Gly Leu Val Gln
123         345                 350                 355
125 cag ggc tat caa tcc ctt aat gat ata cct gac aga gta caa cgc caa   1159
126 Gln Gly Tyr Gln Ser Leu Asn Asp Ile Pro Asp Arg Val Gln Arg Gln
127     360                 365                 370
129 acc acg act gtc gta gca ggt atc aaa agg gtc ttg aat tcc att ggt   1207
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130 Thr Thr Thr Val Val Ala Gly Ile Lys Arg Val Leu Asn Ser Ile Gly
131 375             380             385             390
133 tca gat atc gac aat gta act cag cgt ctt cct att cag gat ata ctc    1255
134 Ser Asp Ile Asp Asn Val Thr Gln Arg Leu Pro Ile Gln Asp Ile Leu
135             395             400             405
137 tca gca ttc tct gtt tat gtt aat aac act gaa agt tac atc cac aga    1303
138 Ser Ala Phe Ser Val Tyr Val Asn Asn Thr Glu Ser Tyr Ile His Arg
139             410             415             420
141 aat tta cct aca ttg gaa gag tat gat tca tac tgg tgg ctg ggt ggc    1351
142 Asn Leu Pro Thr Leu Glu Glu Tyr Asp Ser Tyr Trp Trp Leu Gly Gly
143             425             430             435
145 ctg gtc atc tgc tct ctg ctg acc ctc atc gtg att ttt tac tac ctg    1399
146 Leu Val Ile Cys Ser Leu Leu Thr Leu Ile Val Ile Phe Tyr Tyr Leu
147             440             445             450
149 ggc tta ctg tgt ggc gtg tgc ggc tat gac agg cat gcc acc ccg acc    1447
150 Gly Leu Leu Cys Gly Val Cys Gly Tyr Asp Arg His Ala Thr Pro Thr
151 455             460             465             470
153 acc cga ggc tgt gtc tcc aac acc gga ggc gtc ttc ctc atg gtt gga    1495
154 Thr Arg Gly Cys Val Ser Asn Thr Gly Gly Val Phe Leu Met Val Gly
155             475             480             485
157 gtt gga tta agt ttc ctc ttt tgc tgg ata ttg atg atc att gtg gtt    1543
158 Val Gly Leu Ser Phe Leu Phe Cys Trp Ile Leu Met Ile Ile Val Val
159             490             495             500
161 ctt acc ttt gtc ttt ggt gca aat gtg gaa aaa ctg atc tgt gaa cct    1591
162 Leu Thr Phe Val Phe Gly Ala Asn Val Glu Lys Leu Ile Cys Glu Pro
163             505             510             515
165 tac acg agc aag gaa tta ttc cgg gtt ttg gat aca ccc tac tta cta    1639
166 Tyr Thr Ser Lys Glu Leu Phe Arg Val Leu Asp Thr Pro Tyr Leu Leu
167             520             525             530
169 aat gaa gac tgg gaa tac tat ctc tct ggg aag cta ttt aat aaa tca    1687
170 Asn Glu Asp Trp Glu Tyr Tyr Leu Ser Gly Lys Leu Phe Asn Lys Ser
171 535             540             545             550
173 aaa atg aag ctc act ttt gaa caa gtt tac agt gac tgc aaa aaa aat    1735
174 Lys Met Lys Leu Thr Phe Glu Gln Val Tyr Ser Asp Cys Lys Lys Asn
175             555             560             565
177 aga ggc act tac ggc act ctt cac ctg cag aac agc ttc aat atc agt    1783
178 Arg Gly Thr Tyr Gly Thr Leu His Leu Gln Asn Ser Phe Asn Ile Ser
179             570             575             580
181 gaa cat ctc aac att aat gag cat act gga agc ata agc agt gaa ttg    1831
182 Glu His Leu Asn Ile Asn Glu His Thr Gly Ser Ile Ser Ser Glu Leu
183             585             590             595
185 gaa agt ctg aag gta aat ctt aat atc ttt ctg ttg ggt gca gca gga    1879
186 Glu Ser Leu Lys Val Asn Leu Asn Ile Phe Leu Leu Gly Ala Ala Gly
187 600             605             610
189 aga aaa aac ctt cag gat ttt gct gct tgt gga ata gac aga atg aat    1927
190 Arg Lys Asn Leu Gln Asp Phe Ala Ala Cys Gly Ile Asp Arg Met Asn
191 615             620             625             630
193 tat gac agc tac ttg gct cag act ggt aaa tcc ccc gca gga gtg aat    1975
194 Tyr Asp Ser Tyr Leu Ala Gln Thr Gly Lys Ser Pro Ala Gly Val Asn
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Input Set : A:\PTO.txt
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198 Leu Leu Ser Phe Ala Tyr Asp Leu Glu Ala Lys Ala Asn Ser Leu Pro
199               650               655               660
201 cca gga aat ttg agg aac tcc ctg aaa aga gat gca caa act att aaa   2071
202 Pro Gly Asn Leu Arg Asn Ser Leu Lys Arg Asp Ala Gln Thr Ile Lys
203               665               670               675
205 aca att cac cag caa cga gtc ctt cct ata gaa caa tca ctg agc act   2119
206 Thr Ile His Gln Gln Arg Val Leu Pro Ile Glu Gln Ser Leu Ser Thr
207         680               685               690
209 cta tac caa agc gtc aag ata ctt caa cgc aca ggg aat gga ttg ttg   2167
210 Leu Tyr Gln Ser Val Lys Ile Leu Gln Arg Thr Gly Asn Gly Leu Leu
211 695               700               705               710
213 gag aga gta act agg att cta gct tct ctg gat ttt gct cag aac ttc   2215
214 Glu Arg Val Thr Arg Ile Leu Ala Ser Leu Asp Phe Ala Gln Asn Phe
215               715               720               725
217 atc aca aac aat act tcc tct gtt att att gag gaa act aag aag tat   2263
218 Ile Thr Asn Asn Thr Ser Ser Val Ile Ile Glu Glu Thr Lys Lys Tyr
219               730               735               740
221 ggg aga aca ata ata gga tat ttt gaa cat tat ctg cag tgg atc gag   2311
222 Gly Arg Thr Ile Ile Gly Tyr Phe Glu His Tyr Leu Gln Trp Ile Glu
223         745               750               755
225 ttc tct atc agt gag aaa gtg gca tcg tgc aaa cct gtg gcc acc gct   2359
226 Phe Ser Ile Ser Glu Lys Val Ala Ser Cys Lys Pro Val Ala Thr Ala
227     760               765               770
229 cta gat act gct gtt gat gtc ttt ctg tgt agc tac att atc gac ccc   2407
230 Leu Asp Thr Ala Val Asp Val Phe Leu Cys Ser Tyr Ile Ile Asp Pro
231 775               780               785               790
233 ttg aat ttg ttt tgg ttt ggc ata gga aaa gct act gta ttt tta ctt   2455
234 Leu Asn Leu Phe Trp Phe Gly Ile Gly Lys Ala Thr Val Phe Leu Leu
235               795               800               805
237 ccg gct cta att ttt gcg gta aaa ctg gct aag tac tat cgt cga atg   2503
238 Pro Ala Leu Ile Phe Ala Val Lys Leu Ala Lys Tyr Tyr Arg Arg Met
239         810               815               820
241 gat tcg gag gac gtg tac gat gat gtt gaa act ata ccc atg aaa aat   2551
242 Asp Ser Glu Asp Val Tyr Asp Asp Val Glu Thr Ile Pro Met Lys Asn
243         825               830               835
245 atg gaa aat ggt aat aat ggt tat cat aaa gat cat gta tat ggt att   2599
246 Met Glu Asn Gly Asn Asn Gly Tyr His Lys Asp His Val Tyr Gly Ile
247     840               845               850
249 cac aat cct gtt atg aca agc cca tca caa cat tgatagctga tgttgaaact   2652
250 His Asn Pro Val Met Thr Ser Pro Ser Gln His
251 855               860               865
253 gcttgagcat caggatactc aaagtggaaa ggatcacaga tttttggtag tttctgggtc   2712
255 tacaaggact ttccaaatcc aggagcaacg ccagtggcaa cgtagtgact caggcgggca   2772
257 ccaaggcaac ggcaccattg gtctctgggt agtgctttaa gaatgaacac aatcacgtta   2832
259 tagtccatgg tccatcacta ttcaaggatg actccctccc ttcctgtcta ttttgtcttt   2892
261 ttactttttt acactgagtt tctatttaga cactacaaca tatgggtgt ttgttcccat   2952
263 tggatgcatt tctatcaaaa ctctatcaaa tgtgatggct agattctaac atattgccat   3012
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Input Set : **A:\PTO.txt**
Output Set: **N:\CRF3\07032001\I881853.raw**

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269 cttctaaatg agctaaataa gtcaccattg acttcttggt gctgttgaaa ataatccatt    3192
271 ttcactaaaa gtgtgtgaaa cctacagcat attcttcacg cagagatttt catctattat    3252
273 actttatcaa agattggcca tgttccactt ggaaatggca tgcaaaagcc atcatagaga    3312
275 aacctgcgta actccatctg acaaattcaa aagagagaga gagatcttga gagagaaatg    3372
277 ctgttcgttc aaaagtggag ttgttttaac agatgccaat tacggtgtac agtttaacag    3432
279 agttttctgt tgcattagga taaacattaa ttggagtgca gctaacatga gtatcatcag    3492
281 actagtatca agtgttctaa aatgaaatat gagaagatcc tgtcacaatt cttagatctg    3552
283 gtgtccagca tggatgaaac ctttgagttt ggtccctaaa tttgcatgaa agcacaaggt    3612
285 aaatattcat ttgcttcagg agtttcatgt tggatctgtc attatcaaaa gtgatcagca    3672
287 atgaagaact ggtcggacaa aatttaacgt tgatgtaatg gaattccaga tgtaggcatt    3732
289 ccccccaggt cttttcatgt gcagattgca gttctgattc atttgaataa aaaggaactt    3792
291 ggaaaaaaaa aa                                                        3804
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295 <211> LENGTH: 865
296 <212> TYPE: PRT
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306              20                  25                  30
309 Asn Tyr Glu Leu Pro Ala Thr Asn Tyr Glu Thr Gln Asp Ser His Lys
310              35                  40                  45
313 Ala Gly Pro Ile Gly Ile Leu Phe Glu Leu Val His Ile Phe Leu Tyr
314      50                  55                  60
317 Val Val Gln Pro Arg Asp Phe Pro Glu Asp Thr Leu Arg Lys Phe Leu
318 65                  70                  75                  80
321 Gln Lys Ala Tyr Glu Ser Lys Ile Asp Tyr Asp Lys Pro Glu Thr Val
322              85                  90                  95
325 Ile Leu Gly Leu Lys Ile Val Tyr Tyr Glu Ala Gly Ile Ile Leu Cys
326              100                 105                 110
329 Cys Val Leu Gly Leu Leu Phe Ile Ile Leu Met Pro Leu Val Gly Tyr
330              115                 120                 125
333 Phe Phe Cys Met Cys Arg Cys Cys Asn Lys Cys Gly Gly Glu Met His
334      130                 135                 140
337 Gln Arg Gln Lys Glu Asn Gly Pro Phe Leu Arg Lys Cys Phe Ala Ile
338 145                 150                 155                 160
341 Ser Leu Leu Val Ile Cys Ile Ile Ile Ser Ile Gly Ile Phe Tyr Gly
342              165                 170                 175
345 Phe Val Ala Asn His Gln Val Arg Thr Arg Ile Lys Arg Ser Arg Lys
346              180                 185                 190
349 Leu Ala Asp Ser Asn Phe Lys Asp Leu Arg Thr Leu Leu Asn Glu Thr
350              195                 200                 205
353 Pro Glu Gln Ile Lys Tyr Ile Leu Ala Gln Tyr Asn Thr Thr Lys Asp
354      210                 215                 220
357 Lys Ala Phe Thr Asp Leu Asn Ser Ile Asn Ser Val Leu Gly Gly Gly
358 225                 230                 235                 240
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L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date